[ANARTS - Australian National Amateur Radio Teletype Society]

ANARTS News 30/10/94

This is VK2TTY VK2TTY the official station of the Australian National Amateur Radio Teleprinter Society, which includes all digital modes, with the weekly broadcast on the following frequencies:

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  3.545 MHz                  0930 UTC     VK2BQS (Jim)
  7.045 MHz -3               0030 UTC     VK2CTD (Col)
 14.070 MHz (amtor/fec)      0030 UTC     VK2DPM (Alan)
 14.091 MHz                  0030 UTC     VK2BQS (JIM)
146.675 MHz             0030/0930 UTC     VK2JPA (PAT)
144.850 MHz (ax25 bbs)                    VK2JPA AT VK2RWI
                                            (or VK2AAB)
146.675 MHz (rtty mmbbs/repeater)          VK2RTY
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Bits, bauds, baubles and bangles

by Jim Piper, KD6YKL

Back in the days of yore (not mine, yore), when digital communications meant interrupted continuous wave (CW), folks measured transmission rates in worde per minute. Then came Teletype and the favored -yardstick- for information transmission rates became the baud (after French keyboard pioneer Emile Baudot).

As speed advanced to 300 baud, that measure of transmission rate over a digital communications link (which can be a telegraph wire or a radio path) served well. But technology continued to press forward. As rates passed 1200 bits per second (bps), 300 baud began to seem smallish.

Todays fibre-optic lines allow data rates as high as 2.5 gigabits per second (2,500,000,000 bps). Even our relatively narrow UHF ham bands can easily carry data at 9,600 bps.

Most hams use baud to describe data rate regardless of the transmission medium. Yet confusing baud and bps clouds the discussion of data transmission rates. (Its a little like asking what time it is when you want to know how much time is left).

The problem with the indiscriminate use of the term baud stems from a misunderstanding of its meaning. According to Webster, the IEEE and the ARRL, a baud is - a unit of signalling speed equal to one discrete condition or event per second. In CW, a -discrete signalling condition- occurs each time a radio transmitter is keyed on or off.

How does this relate to baud/ If you key your transmitter at the rate of 5 words per minute and the average word length is six characters, and each character has an average of three dits and dahs, you are producing 180 symbols per minute (5 WPM x 6 x 6). You could say that you were transmitting CW at 6 baud because you are transmitting an average of 360 discrete conditions per minute, or 6 per second. Of course, we normally dont describe CW rates in baud, but in words per minute.

One often hears packet radio and voice frequency modms

discussed in terms of baud. The actual rate at which data (i.e., dugutal information) flows depends on the ratio of bits per baud. Baud rate and bit rate are equal only at speeds of 300 baud and below, and obly for FSK modulation without parity bits. Other modulation schemes sudh as phase-sgift keying (PSK, BPSK, and QPSK), CLOVER, etc., stuff more bits into each baud. Thats why, for the sake of accuracy. I encourage you to use the much less confusing bits-per-second measure rather than the baud.

(Just kidding about the baubles and bangles).

Reprinted from the Digital Journal October 1994

IPS WEEKLY REPORT

21 OCTOBER - 27 OCTOBER

ISSUE No 43

DATE OF ISSUE: 28 OCTOBER 1994

INDICES:

DATE	21	22	23	24	25	26	27	
10CM	88	86	84	82	89	93	93	
A	1	18	37	24	8	8	(7	ESTIMATED)
T	27	37	15	15	-21	7	38	

SOLAR ACTIVITY WAS VERY LOW 21ST, AND 26TH-27TH OCTOBER, AND LOW 22ND-25TH.

THE GEOMAGNETIC FIELD AT LEARMONTH (WA) WAS QUIET 21ST, INCREASING TO UNSETTLED TO ACTIVE ON 22ND. ON 23RD THE FIELD WAS AT ACTIVE TO MINOR STORM LEVELS, RETURNING TO UNSETTLED ON 24TH, QUIET ON 25TH, AND QUIET TO UNSETTLED 26TH-27TH OCTOBER.

IONOSPHERIC F2 CRITICAL FREQUENCIES WERE NEAR PREDICTED MONTHLY VALUES 21ST-24TH OCTOBER, THEN UP TO 20 PER CENT BELOW PREDICTED VALUES ON 25TH-26TH. ON 27TH THE FIELD WAS ENHANCED 15-30 PER CENT DURING LOCAL NIGHT.

FORECAST (28 OCTOBER - 03 NOVEMBER)

SOLAR: LOW

GEOMAGNETIC: ACTIVE TO MINOR STORM LEVELS ON 30 OCTOBER, UNSETTLED TO ACTIVE OTHERWISE.

IONOSPHERIC: NEAR NORMAL UNTIL 31 OCTOBER, 15 PER CENT DEPRESSIONS EXPECTED THEREAFTER.

COURTESY OF IPS RADIO AND SPACE SERVICES

VK2SG RTTY DX NOTES 21 OCT 94

VK2SG RTTY DX NOTES FOR WEEK ENDING 21 OCT 1994 (BID RTDX1021)

OUR THANKS THIS WEEK GO TO DJ3IW AND THE CENTRAL EUROPE DX CLUSTER DB0SPC, I5FLN, JA3MNP, WB2CJL, W5KSI, W6/G0AZT, WA0PUJ, WF5T, AND THE NJ0M NODE OF THE MINNESOTA DX PACKET CLUSTER NETWORK.

BANDPASS:

FRIDAY 14
0020-14085 8R1TT QSL P.O. BOX 5194, RICHMOND, CA 94805
0140-7082 8R1TT
1342-21087 3DA0CA QSL TO JON RUDY, BOX 329, MBABANE, SWAZILAND
1409-21052 8R1TT
1836-14087 PJ7/N6OXR
1949-14086 ET3SID
2053-14086 VK2KM
2250-14091 Z21HD

SATURDAY 15
0227-7090 KP2N
0334-7084 8R1TT
0341-3603 N9NCX
0819-14076 3X0DEX
0836-14085 9K2HN
1218-14085 8R1TT
1218-14088 PJ7/N6OXR
1238-14084 OH2GI
1247-14087 8R1K
1249-14083 RU3AT
1426-14091 VS6WV
1446-14084 5H3JA
1540-14087 JW0I
1558-21089 Z21HD
1647-14080 V85GA
1650-21082 ZS6ARF
1916-21092 5W1MM
2148-21092 V63AS QSL JA3JA
2347-21078 A35MW
2349-21097 VK6GOM

SUNDAY 16
0544-7035 ZL3GQ
0957-21092 TZ6FIC
1001-21091 9Q5ARJ
1004-21081 A71EY
1158-7031 5W1MM
1210-7030 V63AS
1218-21093 YB2CPO
1234-21083 8R1TT
1314-21084 OS6AA
1534-21094 KP2N
1612-21082 SV1NA
1617-21078 SV2FN
1705-21087 Z21HD
1803-14089 9K2WA
1824-21091 5W1MM

1942-21085 V63AS
2057-21086 A35CT
2303-21081 AH6JL
2311-21092 NH6XM

MONDAY 17
1208-14086 OS6AA
1223-14083 9K2IC
1231-14084 8R1TT
1238-14086 UT5PF
1642-21088 GW3SFU
2137-14084 NL7CH

TUESDAY 18
1422-14089 S53X
1458-21081 8R1TT
1635-21081 3DA0CA
1827-14088 OD5PL

WEDNESDAY 19
0017-14091 UA0SMF
0040-14086 ZP6CC
0125-14086 JT1CS
1205-14083 UX2FXF QSL VIA G3WKI
1225-14086 CU1AC
1229-14086 CU1EC
1435-14087 VQ9JB
1751-21084 8R1TT

THURSDAY 20
1257-14085 CU1AC

NOTES OF INTEREST:

NAMIBIA - THE TEAM OF N9NS, N0AFW, NH6UY, AH9B, AND WA0PUJ WILL OPERATE V51/ FROM 23 OCTOBER THROUGH 6 NOVEMBER. BEFORE AND AFTER THE CQWW SSB CONTEST, IN WHICH THEY WILL OPERATE AS V51T, LOOK FOR THEM ON RTTY. QSL ALL CONTACTS TO WA2FIJ.

UGANDA - PAUL, WF5T WILL AGAIN OPERATE FROM UGANDA DURING THE MONTH OF NOVEMBER, AS 5X1XT, ON BOTH CW AND RTTY. QSL TO WF5T.

LAOS - LOOK FOR MINORU, JA3MNP BETWEEN 20-27 OCTOBER OPERATING AS XW3MNP. QSL TO P.O. BOX 59, KYOTONISHI 616, JAPAN.

FOR NEXT WEEK'S BULLETIN, SEND YOUR BANDPASS AND NOTES OF INTEREST TO LUCIANO, I5FLN AT ZS5S.ZAF.AF.

GOOD HUNTING ES 73 DE JULES W2JGR AT W5KSI.#NOLA.LA.USA.NA.

(VIA HF AMTOR)

Apologies, but we do not have the ARRL DX this week at time of writing and despatching the news. Next week, we hope.

Society information

The Society may be contacted at : PO Box 860, Crows Nest 2065 Australia, for such matters as membership and general enquiries. Enquiries can also be made by packet to the President (Col) VK2CTD, or the Secretary (Pat) VK2JPA at

VK2RWI.

News items may be sent to Broadcast Officer PO Box 60 Blacktown 2148 Australia, or by packet to VK2JPA at VK2RWI. Email addresses for the Broadcast Officer are :

patl(at)pitt.conmusic.su.oz.au

The Society welcomes news items on any digital subjects from anywhere in the broadcast coverage area. We are looking for-ward to news from your areas to let other amateurs know what you are doing in the hobby. Hope to hear from you.

73s de Pat VK2JPA Broadcast Officer
That concludes the broadcast for this morning/evening.

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Dave Horsfall (VK2KFU) | dave@esi.com.au | VK2KFU @ VK2AAB.NSW.AUS.OC | PGP 2.6
Opinions expressed are mine. | E7 FE 97 88 E5 02 3C AE 9C 8C 54 5B 9A D4 A0 CD